REMARKS

Claims 1-3, 5-10, 13-15, and 17 are pending. Applicants have cancelled claim 17 without prejudice. Claims 1-3, 5-10, and 13-15 will therefore be pending upon entry of the proposed amendments.

Applicants have amended claim 13 as follows. Applicants have replaced the first occurrence of "or" with "for" as suggested by the Examiner. Applicants have deleted the phrases "or prophylaxis" and "or at risk of." Finally, Applicants have deleted "psoriasis, inflammatory bowel disease, bone resportive disease, osteoarthritis, and diabetes/glycaemic control" from the listing of permissible inflammatory diseases. In summary, claim 13 as presently amended is directed to methods for the treatment of the specific inflammatory diseases: asthma, rheumatoid arthritis, multiple sclerosis, and chronic obstructive pulmonary disease and now recites:

> A method for the treatment of inflammatory disease selected from the group consisting of asthma, rheumatoid arthritis, multiple sclerosis, and chronic obstructive pulmonary disease; the method comprising administering to a person suffering from said inflammatory disease a therapeutically effective amount of a compound of formula (I), or a pharmaceutically acceptable salt thereof, as claimed in Claim 1.

These amendments are being made for the sole purpose of expediting prosecution of the present application, and Applicants expressly reserve the right to pursue any or all of the above cancelled subject matter in a later filed continuing application.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 13-15 and 17 remain rejected for allegedly failing to comply with the enablement requirements of 35 U.S.C. § 112, ¶1 (Office Action, page 8).

The rejection of claim 17 (direct to a method of treating or reducing the risk of cancer) is moot in view of the cancellation.

The rejection of claim 13 has been met, in part, by amending the claims. More specifically, Applicants have deleted the phrases "or prophylaxis" and "or at risk of" as well as the diseases "psoriasis, inflammatory bowel disease, bone resportive disease, osteoarthritis, and diabetes/glycaemic control." As such, claim 13 as presently amended is directed to methods for the treatment (not prophylaxis) of specific inflammatory diseases selected from the group consisting of:

- asthma (characterized by chronic airways inflammation);
- rheumatoid arthritis (characterized by inflammation of the joints),
- multiple sclerosis (a chronic inflammatory disorder of the central nervous system); and
- chronic obstructive pulmonary disease (characterized by chronic airways inflammation).

[1] The Federal Circuit discussed the purpose of the enablement requirement of 35 U.S.C. § 112, ¶1 in *Warner-Lambert Co. v. Teva Pharmaceuticals USA, Inc.* 418 F.3d 1326, 1336-1337 (2005) (underline emphasis added):

> The purpose of this requirement is to ensure that 'the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.' *Nat'l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1195-96 (Fed.Cir.1999); see also Donald S. Chisum, 3 Chisum on Patents § 7.01 (2002).

The Federal Circuit in *Warner-Lambert* stressed that the specification must teach one how to make and use the claimed invention without undue experimentation (*Id.* at 1337, emphasis added):

> Accordingly, we have held that the specification must provide sufficient teaching such that one skilled in the art could make and use the full scope of the invention without undue experimentation. *[citations omitted]* 'The key word is 'undue,' not experimentation." *Wands*, 858 F.2d at 737 (citation omitted). **That is, the specification need only teach those aspects of the invention that one skilled in the art could not figure out without undue experimentation**. See, e.g., *Nat'l Recovery Techs.*, 166 F.3d at 1196 ('The scope of enablement ... is that which is disclosed in the specification plus the scope of what would be known to one of ordinary skill in the art without undue experimentation.'); *Wands*, 858 F.2d at 736-37 ('Enablement is not precluded by the necessity for some experimentation such as routine screening.').

[2] The specification teaches a genus of thiophene carboxamide compounds that are capable of inhibiting IκB kinase-2 (IKK-2) activity. Such compounds are claimed in claim 1, which according to the Examiner "appear allowable" (Office Action, page 2). In addition:

[A] The specification teaches one how to both synthesize and administer the claimed compounds (specification at page 10, line 1 through page 13, line 12; page 16, line 11 through page 18, line 11; and the numerous synthesis examples beginning at page 18). The specification also provides art recognized *in vitro* assays that can be used, e.g., to evaluate the claimed compounds' ability to inhibit IKK-2 activity (see specification at pages 32-36). IKK-2 as well as the aforementioned inhibitory assays were known in the art as of Applicants' filing date.

[B] The specification teaches that the claimed compounds are capable of inhibiting IκB kinase-2 (IKK-2) activity. See, e.g., Specification at page 7, lines 21-22. See also the working example at page 32, lines 4-27 ("IKK-2 Filter Kinase Assay"), which provides (lines 26-27, emphasis added):

> When tested in the above assay, the compounds of Examples 1 to 13 gave IC_{50} values of less than 10 μM indicating that they are **expected to show useful therapeutic activity**.

The Office has provided no evidence that the observed *in vitro* effect fails to show predictability or is not relevant.

[C] The nexus between (1) IKK-2 inhibition and (2) inflammation, inflammatory diseases (which encompass the specifically claimed disorders), and the treatment of inflammatory diseases was established (and arguably well established) as of Applicants' filing date. This is discussed in detail in the Background[1] section of the specification. Since the claimed compounds are capable of inhibiting IKK-2 activity, the skilled artisan at the time of filing would therefore have reasonably predicted that the claimed compounds would have been useful for treating, at the very least, the specific inflammatory diseases recited in claim 13.

[3] The Federal Circuit in *In re Wright* 27 USPQ2d 1510, 1513 (1993) discussed the requirements for rejecting a claim under the enablement requirement of 35 U.S.C. § 112, first paragraph (emphasis added):

> When rejecting a claim under the enablement requirement of section 112, the PTO bears an initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by that claim is not adequately enabled by the description of the invention provided in the specification of the application; this includes, of course, providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement.

Applicants submit that the Office has not met this burden because, at the very least, the Office has not identified any aspect of the claimed methods that a person of ordinary skill in the art "could not figure out without undue experimentation" (*Warner-Lambert Co. v. Teva Pharmaceuticals USA, Inc.* 418 F.3d 1337). The skilled artisan could evaluate the ability of Applicants' novel and nonobvious claimed compounds to treat asthma, rheumatoid arthritis, multiple sclerosis, and chronic obstructive pulmonary disease by synthesizing a candidate compound of the claims and subjecting that compound to an art-recognized assay for treating

[1] The Federal Circuit in *Callicrate v. Wadsworth Mfg., Inc.* 427 F.3d 1361, 1374 (2005) held that the background section of a patent specification can enable a feature of a claimed invention: "First, a patent specification may sufficiently enable a feature under § 112, ¶ 1, even if only the background section provides the enabling disclosure."

asthma, rheumatoid arthritis, multiple sclerosis, and chronic obstructive pulmonary disease. Of course, this is **not** to say that the specification does not establish a nexus between the claimed compounds and the treatment of the diseases recited in claim 13. Rather, establishing the nexus apparently sought by the Office falls within the purview of routine screening, which in and of itself does not preclude enablement (*see Wands*, 858 F.2d at 736-37).

Thus, the specification provides sufficient teaching such that a person of ordinary skill in the art could practice the claimed methods without undue experimentation.

In view of the foregoing, Applicants respectfully request that the 35 U.S.C. § 112, ¶1 rejection be withdrawn.

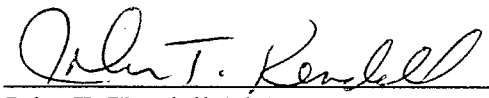
CONCLUSION

Applicants submit that all claims are in condition for allowance.

No fee is believed due. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket No. 06275-460US1 / 100928-1P US.

Respectfully submitted,

Date: April 14, 2008



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